

PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE FULL RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 118 (GERMANTOWN ROAD) AND THE SOUTHBOUND I-270 (EISENHOWER MEMORIAL HIGHWAY) OFF-RAMP IN MONTGOMERY COUNTY, MARYLAND. MD 118 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL CONTINUE TO OPERATE IN NEMA THREE PHASE, SEMI-TRAFFIC-ACTUATED MODE WITH THE MD 118 APPROACHES OPERATING CONCURRENTLY AND THE SOUTHBOUND I-270 OFF-RAMP APPROACH OPERATING EXCLUSIVELY. LED COUNTDOWN PEDESTRIAN SIGNAL HEADS AND NEW PUSHBUTTON ACTUATION WILL BE INSTALLED ACROSS THE SOUTH LEG OF MD 118 AND THE I-270 SOUTHBOUND OFF-RAMP. ALL PEDESTRIAN PUSHBUTTONS WILL BE APS. INTERSECTION LIGHTING WILL BE PROVIDED ON THE NORTHEAST AND SOUTHWEST CORNERS. INTERCONNECT THAT CURRENTLY EXISTS TO THE TO THE NORTHBOUND I-270 ON-RAMP INTERSECTION WILL BE MAINTAINED.

NEW AUDIBLE, PUSHBUTTON-ACTUATED, PEDESTRIAN PHASES WILL BE PROVIDED ACROSS THE SOUTH LEG OF MD 118 AND THE SOUTHBOUND I-270 OFF-RAMP.

APS MESSAGE FOR CROSSING GERMANTOWN ROAD:

A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE "WAIT TO CROSS GERMANTOWN AT I-270 RAMP, WAIT".

B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

APS MESSAGE FOR CROSSING THE SOUTHBOUND I-270 (EISENHOWER MEMORIAL HIGHWAY) OFF-RAMP:

A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE "WAIT TO CROSS I-270 RAMP AT GERMANTOWN, WAIT".

B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

CONTROLLER REQUIREMENTS

A NEW TYPE 'S' BASE MOUNTED CABINET AND EIGHT-PHASE CONTROLLER WITH VIDEO INTERFACE EQUIPMENT, UNINTERRUPTIBLE POWER SUPPLY, AND 2 WIRE CENTRAL CONTROL UNIT WILL BE INSTALLED.

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA:

EXISTING SIGNAL CONTROLLERS AND ALL ASSOCIATED EQUIPMENT IN CABINETS.

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY SHA:

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
900000	1	EA	CONTROLLER CABINET, SIZE "S" W/CTRL, VIDEO INT. 1-8 CAM
900000	1	EA	UPS EQUIPMENT FOR "S" CABINET
900000	1	EA	4 CHANNEL DETECTOR AMPLIFIER
900000	81	SF	SHEET ALUMINUM MAST ARM / POLE MOUNTED SIGN
			- 1 EACH D-3(1) (84"x16") "Germantown RD" - MAST ARM MOUNTED
			- 1 EACH M1-5(6) (48"x72") "NORTH", "118", LEFT ARROW
			- 1 EACH R3-1 (36"x36") - MAST ARM MOUNTED
			- 2 EACH R3-18 (36"x36") - MAST ARM MOUNTED
			- 2 EACH R3-5L (30"x36") - MAST ARM MOUNTED
			- 3 EACH R10-3(1) (9"x15") "GERMANTOWN ROAD" - POLE MOUNTED
			- 2 EACH R10-3(1) (9"x15") "I-270 RAMP" - POLE MOUNTED

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MS. ANYESHA MOOKHERJEE
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 513-7404

MR. TOM FOUNTAIN
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (301) 513-7304

MR. ED RODENHIZER
CHIEF - SIGNAL SHOP
PHONE: (410) 787-7650

MR. VICTOR GRAFTON
DISTRICT UTILITY ENGINEER
PHONE: (301) 513-7350

MS. CORREN JOHNSON
CHIEF - TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630

MR. MIKE STOCKER
SUPPLY OFFICE IV (SIGNAL SHOP WAREHOUSE)
PHONE: (410) 787-7696

MR. EUGENE BAILY
CHIEF - SIGN OPERATIONS SECTION
PHONE: (410) 787-7670

MR. PAUL WILSON
PEPCO
PHONE: (301) 548-4332

THE CONTACT PERSON FOR MCDPWT IS AS FOLLOWS:

MR. KAMUL HAMUD
MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION
PHONE: (240) 777-8761

VACANT
MONTGOMERY COUNTY SIGNAL SHOP
PHONE: (301) 279-1291

EQUIPMENT LIST "B"

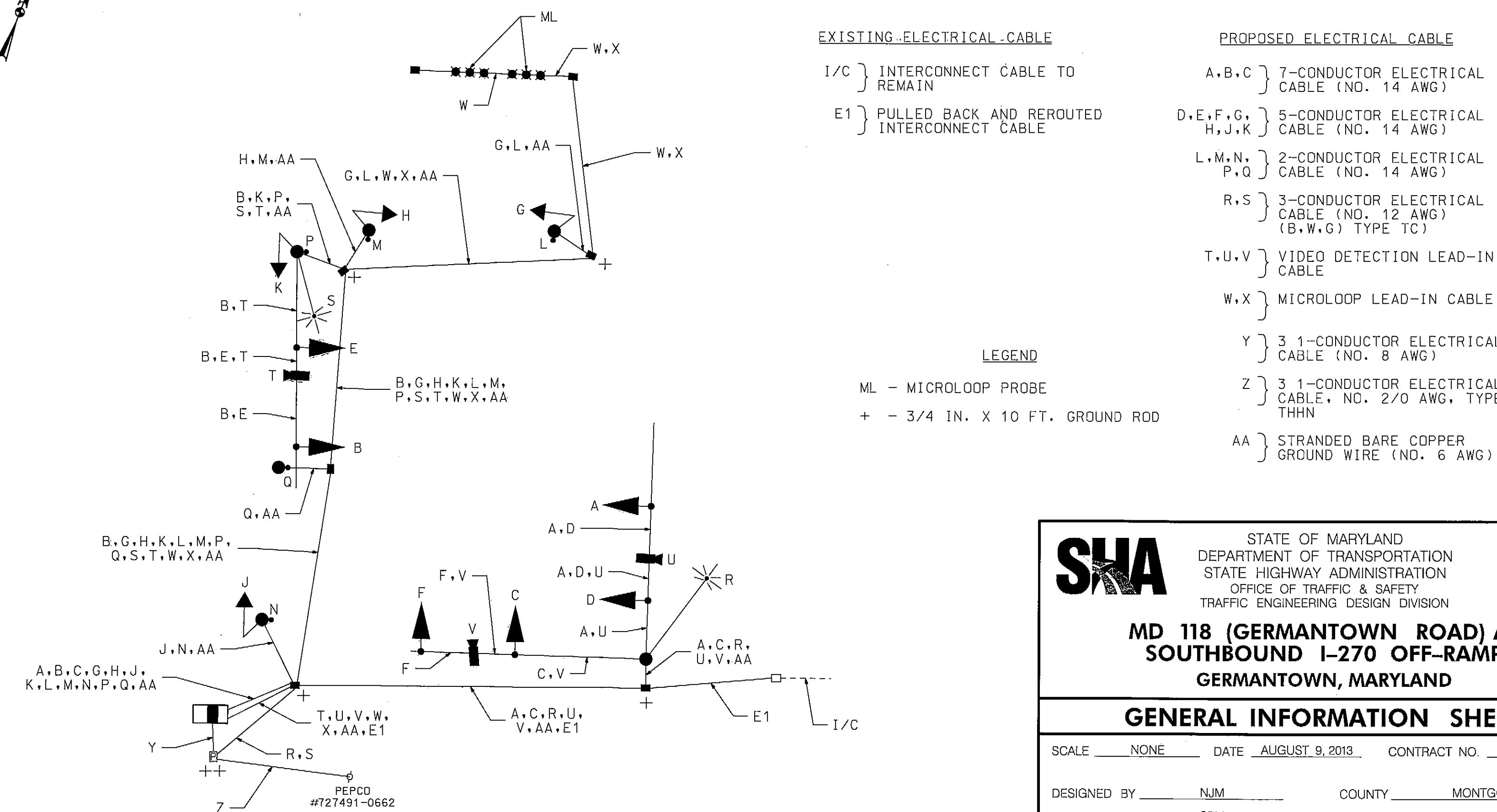
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
100800	1	EA	MAINTENANCE OF TRAFFIC (PER INTERSECTION)
201032	14	CY	CLASS 2 EXCAVATION
203030	6	CY	TEST PIT EXCAVATION
585617	100	LF	5 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585621	200	LF	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585625	75	LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585700	350	LF	REMOVAL OF EXISTING PAVEMENT MARKING LINES, ANY WIDTH
600000	115	LF	TYPE A COMBINATION CURB AND GUTTER ANY HEIGHT OR DEPTH
600000	165	LF	TYPE A CURB ANY HEIGHT OR DEPTH
655105	720	SF	5 INCH CONCRETE SIDEWALK
655120	70	SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
704345	40	SY	PLACING FURNISHED TOPSOIL 4 INCH DEPTH
708220	40	SY	TURFGRASS SOD ESTABLISHMENT
800000	1	EA	2-WIRE APS CENTRAL CONTROL UNIT
800000	2	EA	ANY SIZE LIGHTING ARM ON SIGNAL POLE WITH LED ROADWAY LUMINAIRE
800000	5	EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
800000	4	EA	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
800000	3	EA	IP-BASED VIDEO DETECTION CAMERA & ANY LENGTH LEAD-IN CABLE
800000	4	EA	5 FOOT OR 10 FOOT PEDESTAL POLE WITH BREAKAWAY COUPLINGS, FOUNDATION & GROUND ROD
800000	1	EA	MAST ARM POLE & 50' MAST ARM ANY 'T' DIMENSION, FOUNDATION & GROUND ROD
800000	1	EA	TWIN MAST ARM POLE & 50'/50' MAST ARMS ANY 'T' DIMENSION, FOUNDATION & GROUND ROD
800000	1	EA	100 AMP EMBEDDED METERED SERVICE PEDESTAL, CONCRETE COLLAR & GROUND RODS
800000	2	EA	NONINVASIVE DETECTOR WITH ANY LENGTH LEAD-IN CABLE UP TO 1000'
800000	1	EA	REMOVE & DISPOSE OF EXISTING SIGNAL EQUIPMENT (PER SIGNALIZED INTERSECTION LOCATION)
800000	1	EA	INSTALL CONTROLLER AND CABINET BASE MOUNT (ANY SIZE) INCLUDING F&I FOUNDATION & GROUND ROD
800000	200	LF	1 - CONDUCTOR ELECTRICAL CABLE, NO. 2/0 AWG, TYPE THHN
800000	350	LF	ELECTRICAL CABLE - 3 CONDUCTOR (NO. 12 AWG) (B,W,G) TYPE TC
800000	250	LF	DISCONNECT, PULL-BACK & REROUTE CABLES
800000	200	LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED OR SLOTTED
800000	350	LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
800000	81	SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
800000	1	EA	THIRD PARTY CONCRETE TESTING (PER INTERSECTION)
802501	500	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
810022	25	LF	ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG-THHN/THWN
811001	7	EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
860284	18	EA	12 INCH LED VEHICULAR TRAFFIC, SIGNAL HEAD SECTION
861106	550	LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
861107	550	LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
861108	500	LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)

PHASE CHART

	1	2	3	4	5	6	7	8	9	10
	R	R	R	R	R	R				
	Y	Y	Y	Y	Y	Y				
	G	G	G	G	G	G				
PHASE 2 + 6	G	G	G	G	R	R	W	W	DW	DW
PED CLEARANCE	G	G	G	G	R	R	FL/DW	FL/DW	DW	DW
2 + 6 CHANGE	Y	Y	Y	Y	R	R	DW	DW	DW	DW
PHASE 4	R	R	R	R	G	G	DW	DW	DW	DW
4 CHANGE	R	R	R	R	Y	Y	DW	DW	DW	DW
PHASE 4 ALT	R	R	R	R	G	G	DW	DW	W	W
PED CLEARANCE	R	R	R	R	G	G	DW	DW	FL/DW	FL/DW
4 ALT CHANGE	R	R	R	R	Y	Y	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	DARK	DARK	DARK	DARK

WIRING DIAGRAM



STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

**MD 118 (GERMANTOWN ROAD) AT
SOUTHBOUND I-270 OFF-RAMP
GERMANTOWN, MARYLAND**

GENERAL INFORMATION SHEET

SCALE NONE DATE AUGUST 9, 2013 CONTRACT NO. XY2385185

DESIGNED BY NJM COUNTY MONTGOMERY

DRAWN BY SPM LOGMILE 15011806.05

CHECKED BY BSH T.I.M.S. NO. M005

F.A.P. NO. T.O.D. NO.

T.S. NO. 3419A-GI SQ-03 OF SQ-03 SHEET NO. 3 OF 3

PLOTTED: Friday, August 09, 2013 AT 09:18 PM
FILE: P:\S22 - TEO\23 (PB - 57) - MD 118, MD 185 Signal\Design\Engineering\PlanSet\MD 118 at I-270 South Ramp (TS 3419)\pSG-N001_TS3419A.dgn

BY: NJM/naco

**McCormick
Engineers & Planners
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509 South Exeter Street
4th Floor
Baltimore, Maryland 21202
(410) 662-7400